

STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0062898; AI 20015; PER20080001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

- I. **THE APPLICANT IS:** Total Environmental Solutions, Inc
 Grande Stakes
 P.O. Box 14056
 Baton Rouge, LA 70898

- II. **PREPARED BY:** Rachel Davis

- DATE PREPARED:** October 7, 2008

- III. **PERMIT ACTION:** reissue LPDES permit LA0062898, AI 20015; PER20080001

 LPDES application received: June 19, 2008

 EPA has not retained enforcement authority.

 LPDES permit issued: February 1, 2004
 LPDES permit expires: January 31, 2009

IV. **FACILITY INFORMATION:**

- A. The application is for the discharge of treated sanitary wastewater from a privately owned treatment works serving the Grande Stakes Subdivision.

- B. The permit application does not indicate the receipt of industrial wastewater.

- C. The facility is located on Desoto Road, off Gloria Switch Road, approx. 1.78 miles from Carencro, Lafayette Parish.

- D. The treatment facility consists of an extended aeration sewage treatment plant with chlorine disinfection.

- E. Outfall 001

Discharge Location: Latitude 30° 18' 43" North
 Longitude 92° 4' 27" West

Description: treated sanitary wastewater

Expected Flow: 86 of homes x 400 gallons/day/home = 0.0344 MGD
 10 One-Bedroom Apartments x 250 GPD = 0.0025 MGD

Total Expected Flow: 0.0394 MGD

Calculations for gallons per day were based upon figures obtained from Chapter 15 of the State of Louisiana Sanitary Code, Department of Health and Hospitals, Office of Public Health.

Statement of Basis

LA0062898; AI 20015; PER20080001

Page 2

Type of Flow Measurement which the facility is currently using:
V-Notch Weir

V. RECEIVING WATERS:

The discharge is into an unnamed ditch, thence into an unnamed Coulee, thence into the Vermilion River in segment 060801 of the Vermilion - Teche Basin. This segment is not listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 060801 of the Vermilion - Teche Basin are as indicated in the table below^{1/}:

Degree of Support of Each Use						
Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Not Supported	Not Supported	Not Supported	N/A	N/A	N/A	Full

^{1/}The designated uses and degree of support for Segment 060801 of the Vermilion - Teche Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 060801 of the Vermilion - Teche Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated October 27, 2007 from Boggs (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Statement of Basis

LA0062898; AI 20015; PER20080001

Page 3

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Ms. Rachel Davis
 Water Permits Division
 Department of Environmental Quality
 Office of Environmental Services
 P. O. Box 4313
 Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:**Final Effluent Limits:**

Subsegment 060801, Vermilion River-Headwaters at Bayou Fusilier-Bourbeaux junction to New Flanders Bridge, Hwy. 3073, is not listed on LDEQ's Final 2006 303(d) list as impaired. However, subsegment 060801 was previously listed as impaired for phosphorus, nitrogen, organic enrichment/lowDO, pathogen indicators, suspended solids/turbidity/siltation, and carbofuran, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDLs and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDLs have been established for subsegment 060801:

1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen

This TMDL was revised in December 1999, and approved by EPA on April 5, 2001. This TMDL re-established that NPDES permits for individual point sources in the Vermilion Watershed should continue to be issued on the basis of flow rates as follows:

<u>FLOW RATE</u>	<u>PERMIT LIMITS</u>
greater than 25,000 gpd	May - Dec.: 10 mg/l CBOD ₅ /5 mg/l NH ₃ -N/5 mg/l DO
25,000 gpd or less	Jan. - April: 20 mg/l CBOD ₅ /10 mg/l NH ₃ -N/5 mg/l DO secondary limits year round

Therefore, this discharge will be permitted accordingly.

Vermilion River TMDL for Fecal Coliform

The Vermilion River TMDL for Fecal Coliform was finalized on April 5, 2001, addressing the presence of pathogen indicators in the watershed. As per this TMDL, "...there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL." Therefore, Fecal Coliform effluent limitations will be permitted according to the current state policy.

Statement of Basis

LA0062898; AI 20015; PER20080001

Page 4

TOTAL MAXIMUM DAILY LOAD (TMDL) For TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin

The TMDL states, "Point sources do not represent a significant source of TSS as defined in this TMDL. Point sources discharge primarily organic TSS, which does not contribute to habitat impairment resulting from sedimentation. Because the point sources are minor contributors and discharges of organic suspended solids from point sources are already addressed by LDEQ through their permitting of point sources to maintain water quality standards for DO, the wasteload allocations for point source contributions were set to zero." Therefore, the facility will be permitted according to current state policy.

TMDL for the Pesticide Carbofuran in the Mermentau and Vermilion-Teche River Basins

The TMDL for the Pesticide Carbofuran in the Mermentau and Vermilion-Teche River Basins was finalized on March 21, 2002, and states no point sources are known to discharge Carbofuran; therefore, no allocation was given to point source discharges in the Vermilion-Teche River Basin.

OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
CBOD ₅ May- December January- April		10 mg/l 20 mg/l	15 mg/l 30 mg/l	Based on the <u>1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen</u>
TSS May- December January- April		15 mg/l 20 mg/l	23 mg/l 30 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
Ammonia-Nitrogen May- December January- April		5 mg/l 10 mg/l	10 mg/l 20 mg/l	Based on the <u>1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen</u>

Statement of Basis

LA0062898; AI 20015; PER20080001

Page 5

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
Dissolved Oxygen*		5.0 mg/l	N/A	Based on the <u>1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen</u>

*This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

Other Effluent Limitations:**1) Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Daily Maximum) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X. PREVIOUS PERMITS:

LPDES Permit No. LA0062898: Issued: February 1, 2004
Expires: January 31, 2009

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Monthly Avg	Weekly Avg	Measurement Frequency	Sample Type
Flow	Report	Report	1/week	Measure
CBOD ₅				
May- December	10 mg/l	15 mg/l	2/month	Grab
January- April	20 mg/l	30 mg/l	2/month	Grab
TSS				
May- December	15 mg/l	23 mg/l	2/month	Grab
January- April	20 mg/l	30 mg/l	2/month	Grab
Ammonia-Nitrogen				
May- December	5 mg/l	10 mg/l	2/month	Grab

Statement of Basis

LA0062898; AI 20015; PER20080001

Page 6

January- April	10 mg/l	20 mg/l	2/month	Grab
Fecal Coliform Colonies	200	400	2/month	Grab
DO	5.0 mg/l	---	2/month	Grab

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:**A) Inspections**

A review of the files indicates the following inspections were performed during the period beginning **January 2006** and ending **January 2008** for this facility.

Date: November 4, 2006

Inspector: Shane Miller

Findings and/or Violations:

1. Area well kept and in order
2. Effluent Slightly turbid at the time and receiving stream had sludge present
3. Plant operating properly at the time, sludge blanket in the clarifier was high, plant experiences overloads, Plant shut down during high flows
4. DMR review for June 2005- June 2006 revealed excursions for TSS, BOD, fecal, Dissolved oxygen and Ammonia

B) Compliance and/or Administrative Orders

A review of the files indicates no orders have been issued against the facility

C) DMR Review

A review of the discharge monitoring reports for the period beginning **January 2006** through **June 2008** has revealed the following violations:

Parameter	Outfall	Period of Excursion	Permit Limit	Reported Quantity
DO	001	January 2006	5 mg/l	3.29 mg/l
TSS (monthly)	001	January 2006	20 mg/l	145 mg/l
TSS (weekly)	001	January 2006	30 mg/l	285 mg/l
Fecal	001	January 2006	200	236
BOD (monthly)	001	January 2006	20 mg/l	25 mg/l
BOD (weekly)	001	January 2006	30 mg/l	49 mg/l
DO	001	February 2006	5 mg/l	4.59 mg/l
TSS (monthly)	001	February 2006	20 mg/l	60 mg/l
TSS (weekly)	001	February 2006	30 mg/l	106 mg/l
Fecal (monthly)	001	February 2006	200	934
Fecal (weekly)	001	February 2006	400	4,600
DO	001	March 2006	5 mg/l	1.16 mg/l
TSS (monthly)	001	March 2006	20 mg/l	411 mg/l
TSS (weekly)	001	March 2006	30 mg/l	800 mg/l
Fecal (monthly)	001	March 2006	200	3,746
Fecal (weekly)	001	March 2006	400	35,000
BOD (monthly)	001	March 2006	20 mg/l	89 mg/l
BOD (monthly)	001	March 2006	30 mg/l	173 mg/l
DO	001	April 2006	5 mg/l	1.16 mg/l
TSS (monthly)	001	April 2006	20 mg/l	411 mg/l
TSS (weekly)	001	April 2006	30 mg/l	800 mg/l

Statement of Basis

LA0062898; AI 20015; PER20080001

Page 7

Ammonia (monthly)	001	April 2006	10 mg/l	19.3 mg/l
Ammonia (weekly)	001	April 2006	20 mg/l	21.3 mg/l
Fecal (monthly)	001	April 2006	200	TNTC
Fecal (weekly)	001	April 2006	400	TNTC
BOD (monthly)	001	April 2006	20 mg/l	35.5 mg/l
BOD (weekly)	001	April 2006	30 mg/l	67 mg/l
Ammonia	001	May 2006	5 mg/l	5.79 mg/l
TSS (monthly)	001	June 2008	15 mg/l	39 mg/l
TSS (weekly)	001	June 2008	23 mg/l	55 mg/l
Ammonia (monthly)	001	June 2008	5 mg/l	11.4 mg/l
Ammonia (weekly)	001	June 2008	10 mg/l	20.4 mg/l
Fecal (monthly)	001	June 2008	200	424.3
Fecal (weekly)	001	June 2008	400	4,500
DO	001	July 2006	5 mg/l	4.96 mg/l
Ammonia (monthly)	001	July 2006	5 mg/l	6.63 mg/l
Ammonia (weekly)	001	July 2006	10 mg/l	12.4 mg/l
TSS (monthly)	001	August 2006	15 mg/l	246.5 mg/l
TSS (weekly)	001	August 2006	23 mg/l	487 mg/l
Ammonia (monthly)	001	August 2006	5 mg/l	17.55 mg/l
Ammonia (weekly)	001	August 2006	10 mg/l	17.8 mg/l
Fecal (monthly)	001	August 2006	200	866
Fecal (weekly)	001	August 2006	400	25,000
BOD (monthly)	001	August 2006	10 mg/l	22.9 mg/l
BOD (weekly)	001	August 2006	15 mg/l	38 mg/l
TSS (monthly)	001	September 2006	15 mg/l	41.95 mg/l
TSS (weekly)	001	September 2006	23 mg/l	74 mg/l
Ammonia (monthly)	001	September 2006	5 mg/l	13.1 mg/l
Ammonia (weekly)	001	September 2006	10 mg/l	14.7 mg/l
Fecal (weekly)	001	September 2006	400	1,900
BOD (monthly)	001	September 2006	10 mg/l	11.4 mg/l
BOD (weekly)	001	September 2006	15 mg/l	19 mg/l
Fecal (weekly)	001	October 2006	400	690
DO	001	December 2006	5 mg/l	4.71 mg/l
TSS (monthly)	001	December 2006	15 mg/l	57 mg/l
TSS (weekly)	001	December 2006	23 mg/l	94 mg/l
Ammonia (monthly)	001	December 2006	5 mg/l	13.55 mg/l
Ammonia (weekly)	001	December 2006	10 mg/l	15 mg/l
Fecal (weekly)	001	December 2006	400	3,800
BOD (weekly)	001	December 2006	10 mg/l	10.5 mg/l
DO	001	January 2007	5 mg/l	4.72 mg/l
Fecal (weekly)	001	January 2007	400	5,000
DO	001	February 2007	5 mg/l	2.48 mg/l
TSS (monthly)	001	February 2007	20 mg/l	462 mg/l
TSS (weekly)	001	February 2007	30 mg/l	590 mg/l
Fecal (monthly)	001	February 2007	200	TNTC
Fecal (weekly)	001	February 2007	400	TNTC
BOD (monthly)	001	February 2007	20 mg/l	23 mg/l
TSS (monthly)	001	March 2007	20 mg/l	57.5 mg/l
TSS (weekly)	001	March 2007	30 mg/l	97 mg/l
DO	001	April 2007	5 mg/l	4.79 mg/l
TSS (monthly)	001	April 2007	20 mg/l	337 mg/l
TSS (weekly)	001	April 2007	30 mg/l	625 mg/l

Statement of Basis

LA0062898; AI 20015; PER20080001

Page 8

Fecal (monthly)	001	April 2007	200	TNTC
Fecal (weekly)	001	April 2007	400	TNTC
DO	001	May 2007	5 mg/l	4.06 mg/l
TSS (monthly)	001	May 2007	15 mg/l	35 mg/l
TSS (weekly)	001	May 2007	23 mg/l	43 mg/l
DO	001	June 2007	5 mg/l	3.88 mg/l
TSS (monthly)	001	June 2007	15 mg/l	96.5 mg/l
TSS (weekly)	001	June 2007	23 mg/l	176 mg/l
TSS (monthly)	001	July 2007	15 mg/l	18.5 mg/l
TSS (weekly)	001	July 2007	23 mg/l	26 mg/l
Ammonia (monthly)	001	July 2007	5 mg/l	5.46 mg/l
Ammonia (weekly)	001	July 2007	10 mg/l	10.3 mg/l
DO	001	August 2007	5 mg/l	4.8 mg/l
TSS	001	August 2007	23 mg/l	25 mg/l
Ammonia (monthly)	001	September 2007	5 mg/l	12 mg/l
Ammonia (weekly)	001	September 2007	10 mg/l	14.4 mg/l
TSS (monthly)	001	October 2007	15 mg/l	39.5 mg/l
TSS (weekly)	001	October 2007	23 mg/l	63 mg/l
Ammonia (monthly)	001	October 2007	5 mg/l	10.63 mg/l
Ammonia (weekly)	001	October 2007	10 mg/l	20.4 mg/l
Fecal (weekly)	001	October 2007	400	860
TSS (monthly)	001	November 2007	15 mg/l	35 mg/l
TSS (weekly)	001	November 2007	23 mg/l	66 mg/l
TSS (monthly)	001	December 2007	15 mg/l	18 mg/l
DO	001	January 2008	5 mg/l	4.9 mg/l
Ammonia (monthly)	001	May 2008	5 mg/l	17.6 mg/l
Ammonia (weekly)	001	May 2008	10 mg/l	18.7 mg/l
Fecal (monthly)	001	May 2008	200	600
Fecal (weekly)	001	May 2008	400	600

XII. ADDITIONAL INFORMATION:

The Louisiana Department of Environmental Quality (LDEQ) reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDL's. The LDEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

In accordance with LAC 33:IX.2903., this permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(c) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:

- a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
- b) Controls any pollutant not limited in the permit; or
- c) Requires reassessment due to change in 303(d) status of waterbody; or

Statement of Basis

LA0062898; AI 20015; PER20080001

Page 9

- d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between **0.02** and **0.10** MGD.

<u>Effluent Characteristics</u>	<u>Monitoring Requirements</u>	
	<u>Measurement</u>	<u>Sample</u>
	<u>Frequency</u>	<u>Type</u>
Flow	1/week	Measure
CBOD ₅	2/month	Grab
Total Suspended Solids	2/month	Grab
Ammonia-Nitrogen	2/month	Grab
Dissolved Oxygen	2/month	Grab
Fecal Coliform Bacteria	2/month	Grab
pH	2/month	Grab

XIII. TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

XIV. REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Total Environmental Solutions, Inc, Grande Stakes, June 19, 2008.